

Student work

Advantages and Disadvantages of GM Food

Science had developed and evolved that now it is able to create a total new organisms, which did not exist in the past. The process in which to make these plants is called genetic engineering or genetic modification using biotechnology. It involves the wanted characteristics moving its gene from a living organism where they have its naturally, to another living organism that the characteristics are wanted. There are genetically engineered plants that are eatable, and they are classified as genetically engineered food (GEF) or genetically modified food (GMF). Some examples of GMF are maize, tomatoes, potatoes and meats. In this paper, it will be going to state the advantages and disadvantages of GMF, including the short-term benefits and long-term disadvantages, proving whether the GMF should be kept and more should be produced or rather should be banned. Also, the ethical issues with cultural influences of GMF and contribution and limitation of integrated how science interweaved GMF into society, will going to be discussed.

To begin with, GMF has a lot of benefits, especially to the farmers, governments and of course, to all people in the world. Farmers would have to pay less for pesticides because GM plants are often pest-resistance, which also lead to the reduction of storage costs, therefore, it reduces the cost of whole cultivation and environmental damage. Also, growing GM crops that are able to withstand salinity and drought can reduce farmers' economic burden on costs involved in soil reclamation¹. It is very important for all people in the world as well, since GMF is able to increase the crop yields to feed the world population, which reduce some starvation occurring in the world. This shows that science contribute help eliminate world's one of the major issue that people are suffering for long time. On top of that, science had made the same type of food containing totally new and improved nutrient components such as increasing the protein content of rice². This mean that people are able to gain more nutrients by eating the same type of food, and be healthier. Thus, there are quite a lot of advantages in creating and consuming GMF.

On the other hand, all things have front and back side of the subject, and GMF is not the exceptional. To give out some disadvantages, it could be noticed that majority of disadvantages related to GMF is long-term. Firstly, opposite to the reduction use of pesticide, however, the use of herbicides would increase because of greater herbicide resistance of GMF. The use of great amount of herbicides lead to residual damage, which is known as "artificial evolution" of plants that is resistant to natural pest, and some bacterias with resistance to antibiotics. Secondly, the hazardous effects to people will be from the newly introduced proteins, the DNA vaccines from meat industry might lead some people to suffer from allergy and illness. The sarcastic fact about GMF is that people are able to obtain more nutrients from GMF but they also have risks of getting illness from those nutrients. However, there is no scientific and medical evidence to say that GMF is unsafe for people to consume it³. So, it might not be the way to say straight away that GMF should be banned, though some loss would be made in the aglicultural-department industry sector because of reduced chemical inputs, which is pesticides. That means, GMF have both advantages and disadvantages on environment, health and economy.

Moving on to the main issue, that whether GMF should be kept and more produced or should be banned, from some people's opinion, they are highly appreciated because of their tastes. The some groups that getting benefits from the production of GMF are people, government and farmers.

¹ <http://Scope.educ.washington.edu/gmfood/>

² <http://challenge.uhome.net/gmfood.htm>

³ <http://challenge.uhome.net/gmfood.htm>

However, some people are hesitant to buy those food because of the lack of labelling provided. People are demanding to know whether they have the rights to learn what is contained in GMF that they want to buy. This is the main ethical reason of this topic because farmers and governments refuse to label them for their own benefits while people, especially vegetarians who worry about eating food that contain genes from animals, for religious and also health or possibly other reasons⁴. This is where the science is still limited because there are still doubts and unsure of the health problems that GMF have in potential, thus the producers of GMF is hesitating to label the food. Some people just refuse to buy GMF because they do not want to consume scientifically created plants or crops, which this is also the ethical issues for the world to whether people should consume more scientifically created things. Thus, no distinct answer could be drawn at the moment in this world, whether people should be consumed, or be banned.

In conclusion, GMF are very useful in some areas, which satisfies people, save the world from starvation and let the producers to be more economically wealthy. However, there is always some negative issues that are needed to be solved in the near future, such as science should prove that GMF is safe to consume and they should also improve on the medicals to cure the allergy and illnesses that are caused by eating GMF. Thus, it is unable to decide that GMF should be banned or should be consumed at this point, but possibly science would be able to solve in the near future.

Bibliography

“GM Food” <<http://challenge.uhome.net/gmfood.htm>> (Current at 4 Sep.2002).

“SCOPE = GM Food” <<http://Scope.educ.washington.edu/gmfood/>> (Current at 5 Sep.2002).

⁴ <http://challenge.uhome.net/gmfood.htm>